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S/186/60/002/001/020/022  
A057/A129

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AUTHORS: Levin, V.I.; Serebryakov, N.G.; Meshcherova, I.V.

TITLE: Preparation of silver-111 from neutron-irradiated palladium

PERIODICAL: Radiokhimiya, v. 2, no. 1, 1960, 120 - 126

TEXT: A method was developed for the separation of Ag<sup>111</sup> from neutron-irradiated palladium by isotopic exchange with AgCl precipitate. The irradiated Pd can be used after separation from silver as Pd<sup>103</sup> or irradiated for a second time to obtain Ag<sup>111</sup>. With its shorter half-life and low yield in gamma-radiation (~9%) of relatively low energy (0.24 and 0.34 Mev) Ag<sup>111</sup> is more convenient for medical purposes than P<sup>32</sup> or Au<sup>198</sup>. In the present study two methods, which have been described in literature, were employed: the method of precipitating an AgCl carrier from solutions of irradiated palladium [Ref. 2: F. Silicio et al., Anal. Chem., 28, 3, 365 (1956)], and the extraction of Ag<sup>111</sup> from solutions of irradiated palladium by isotope exchange with already precipitated inactive AgCl [Ref. 3: W.W. Meinke and D.N. Sunderman, Science, 121, 777 (1955), Nucleonics, 13, 12, 58 (1955)]. Optimum conditions for the separation of Ag<sup>111</sup> by co-precipitation with AgCl were determined, the degree of extraction and the radiochemical

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purity of the product were estimated. Optimum concentration of HCl is 1 N and at least 0.1 mg of carrier must be used. Heating the solution to 95 - 100°C effects formation of macrocrystalline precipitates. The AgCl precipitate containing  $\text{Ag}^{111}$  was re-precipitated 3 - 4 times. Extraction degrees were tabulated. The effect of  $\text{HNO}_3$  concentration on the extraction degree of  $\text{Ag}^{111}$  was investigated in experiments with isotopic exchange and it was observed that concentrations of  $\text{HNO}_3$  used in aqua regia do not interfere with the extraction, and results obtained by the isotopic exchange method are tabulated. The gamma-spectrum of the products obtained by the two methods was investigated with a scintillation counter containing a  $\Phi\beta\gamma$ -29 (FEU-29) photomultiplier and a  $\text{NaJ}(\text{Tl})$  crystal. The impurity present in the  $\text{Ag}^{111}$  sample obtained by co-precipitation can be seen from the maxima (450, 660 - 890 and 1,340 kev) in the gamma-spectrum (Fig. 3). The same impurity, i.e., a long lived isotope with a half-life of more than 200 days was determined in the  $\text{Ag}^{111}$  product prepared by isotopic exchange and was identified as  $\text{Ag}^{110}$ . In both products  $\text{Ag}^{110}$  is present in an amount of about 0.05%. It is supposed that  $\text{Ag}^{110}$  is formed from silver impurities present in the original palladium, or as product of secondary nuclear reactions. Since the isotopic exchange method is simpler, more efficient than co-precipitation, and since the same purity of the product is observed in both methods, the following preparation

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technique is suggested: About 5 g of palladium was bombarded for 23 - 25 days in a  $\sim 10^{13}$  neutrons/cm<sup>2</sup> sec beam. The sample is then dissolved by boiling in 30 - 50 ml of aqua regia at 95 - 100°C. The resulting solution is diluted with H<sub>2</sub>O to a concentration of 3 N HCl, 30 mg silver in the form of macrocrystalline AgCl precipitate is added and mixed for 15 min at 95 - 100°C. Then the precipitate is filtered off, washed with 1% HNO<sub>3</sub> solution, and dissolved in 20 ml of concentrated ammonium hydroxide solution, re-precipitated twice, and the final ammoniacal solution is heated by adding hydrazine solution. The precipitated Ag metal is filtered off, washed, and dissolved in 5 - 10 ml HNO<sub>3</sub>, the solution is evaporated until dry and the residual is dissolved in distilled water. From 5 g of palladium at least 300 mc of Ag<sup>111</sup> were obtained. After separation from Ag, the residual palladium (with 150 - 200 mc activity) can be used as Pd<sup>103</sup> for medical purposes or irradiated again to manufacture Ag<sup>111</sup>. There are 3 figures, 2 tables and 6 references: 1 Soviet-bloc and 5 non-Soviet-bloc.

SUBMITTED: May 23, 1959

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S/186/60/002/001/020/022  
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Preparation of silver-111 from neutron-irradiated....

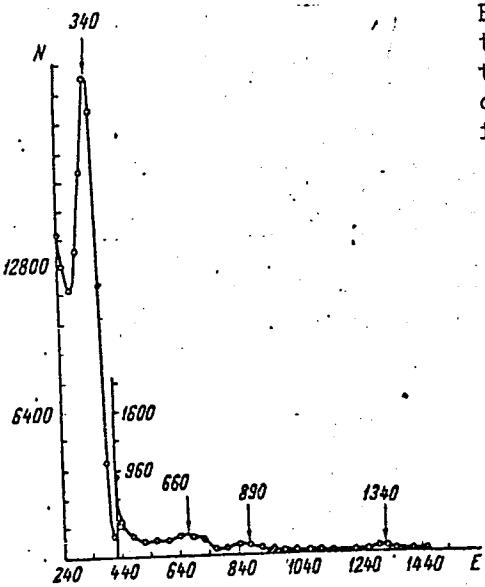


Figure 3: The harder gamma-spectrum range of the Ag<sup>111</sup> sample obtained by the co-precipitation method with one reprecipitation of silver chloride. N - counts per minute; E - energy in kev.

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"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001548020004-7

LEVIN, V.I.; SEREBRYAKOV, N.G.; KOZLOV, M.D.

Physicochemical properties of a new radiotherapeutic preparation  
containing P<sub>32</sub>. Med. rad. 5 no.4; 53-55 Ap '60. (MIRA 13:12)  
(PHOSPHORUS ISOTOPES)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001548020004-7"

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001548020004-7

SEDOV, V.V.; SEREBRYAKOV, N.G.; TARASOV, N.F.; GOREL'CHIK, K.I.

Diagnosis of disorders of pulmonary circulation with a suspension  
of radioactive gold. Med. rad. 9 no.1:47-49 Ja '64. (MIRA 17:9)

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001548020004-7"

SELOV, V.V.; SEREBRYAKOV, N.G.; TARASOV, N.F.

Prospects for the use of radioactive colloids in the treatment of  
malignant lymph node lesions. Med. rad. 9 no.3:3-12 Mr <sup>164</sup>  
(MIRA 17:12)

KRASNOV, M.L., prof.; SIVOSHINSKIY, D.S., dotsent; KOSTYUKOVA, T.D.;  
TADE, A.A.; SEREBRYAKOV, N.G.

Case of successful use of yttrium beta-applicator in epibulbar  
melanoblastoma. Trudy TSIU 71:239-242 '64. (MIRA 18:6)

1. Kafedra glaznykh bolezney (zav. prof. M.L. Krasnov) i kafedra  
meditsinskoy radiologii (zav. prof. V.K. Modestov) TSentral'nogo  
instituta usovershenstvovaniya vrachey i Moskovskaya glaznaya  
klinicheskaya bol'ница.

VOSKRESENSKIY, A.P., kand. tekhn. nauk, starshiy nauchnyy sotrudnik;  
SEREBRYAKOV, N.I.

Collector three-phase "Schrage" system shunt motors for wool  
spinning machines. Tokst. prom. 24 no.5:73-76 My '64  
(MIRA 18:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki (VNIIEKh) (for Voskresenskiy). 2. Nachal'nik konstruktorskogo sektora Vsesoyuznogo nauchno-issledovatel'skogo instituta elektromekhaniki (for Serebryakov).

DRUZHININ, A.V.; TIKHONOV, N.D.; SEREBRYAKOV, N.N.

Tectonic pebbles in disjunctive dislocations occurring among  
granitoids. Izv.vys.ucheb.zav.;geol.i grazv. 4 no.10:48-52  
0 '61. (MIRA 14:12)

1. Moskovskiy institut tsvetnykh metallov i zolota imeni Kalinina.  
(Pebbles)

SE-BEBAKOV, V.S.

Coal resources in Kazakhstan and prospects for developing coking coal deposits. Izv. Akad. Kaz. SSR. Ser. geol. no. 1:66-74 '69.  
(CIA 14:2)  
(Kazakhstan - Cokes)

SEREBYAKOV, N.S.; MURAKHOVSKAYA, Ye.I.; KHALTURIN, A.I., kand.khim.nauk

New coal deposit in the Rudnyy Altai. Vest. AN Kazakh. SSR 17  
no. 2:77-82 F '61. (MIRA 14:2)  
(Belokamenka (Altai Territory)—Coal)

SEREБRYAKOV, N. V.

"Row Fertilization of Coriander." Cand Agr Sci, Voronezh  
Agricultural Inst, Min Higher Education USSR, Voronezh, 1954.  
(KL, No 7, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical  
Dissertations Defended at USSR Higher Educational Institutions.  
(14)

SEREBRYAKOV, P. N.

"I. P. Pavlov as Scientist, Man, and Citizen, Acrob.5, 1949. Prof.

SEREБRYAKOV, P. N.

33471. I. P. Pavlov- Velikiy Russkiy Vchenyy. Sov. Zootekhnika, 1949, № 6, C. 3-8,  
C. Porter

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

SEREENYAKOV, P. N.

333st. Vliyanije Ucheniya Akad. I. P. Pavlova Na Raosty V Oblasti  
Fiziologii Sel'skokhozyay-tvennykh Zhivotnykh.—Avt. Uzman V Kolon-titule.  
Sov. Zootekhnika, 1949, No. 6, c. 9-18.  
So. Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

SEREBRYANOV P. M.

Osnovy fiziologii sel'skokhozyaystvennykh zhivotnykh (Fundamentals of the Physiology of Farm Animals). 2nd enlarged edition. Ic Sov, Sel'khozgiz, 1950, 152 pages.

The author of the book attempts to give stockraisers the necessary knowledge concerning animal physiology.

U-4250

1. SEREBRYAKOV, P.N.
2. USSR (600)
4. Veterinary Physiology
7. Achievements and tasks in the field of the physiology of farm animals. Trudy VIZh 20, 1952
9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

SEREБRYAKOV, R. A., KOLESOV, I. V. SIKOLENKO, V. F., ORAVETS, Y.,  
FROLOV, N. S., KAZAKOV, V. A., SKRYL, I. I., AND DVORETSKIY, A. S.

"Choice of Coordinates in Regard to the Entrance of Particles into  
and Emulsion Chamber (STsU-1),

Joint Institute of Nuclear Research, Dubna, USSR.

report submitted for the IAEA conf. on Nuclear Electronics, Belgrade, Yugoslavia  
15-20 May 1981

SEREБRYAKOV, R.V.; DALIN, M.A.; KONOVAL'CHUKOV, A.G.

Some regularities in the reaction of cyanoethylation of hydrocyanic acid. Dokl. AN Azerb. SSR 19 no.11:31-34 '63. (MIRA 17:3)

1. BNIIolefin.

SEREБRYAKOV, S., doktor ekonom. nauk, prof.

Principles of organization and distribution. Sov. torg. 36  
no.7:9-12 J1 '63. (MIRA 16:8)

(Stores, Retail)

DRUZ, Tamara Filippovna; SEREBRYAKOV, Serafim Aleksandrovich;  
FEDYAYEVA, N.A., red, izd-va; PODROVA, V.A., tekhn. red.

[Directives on accounting, control and inspection in river  
transportation] Bukhgalterskii uchet i kontrol'no-revi-  
zionnaia rabota na rechnom transporte; sbornik rukovodya-  
shchikh dokumentov. Moskva, Izd-vo "Rechnoi transport," 1962.  
(MIRA 16;6)  
596 p.

i. Russia (1917- R.S.F.S.R) Ministerstvo rechnogo flota,  
TSentral'naya bukhgalteriya.  
(Inland water transportation--Accounting)

SEREBEYAKOV, S.G.; LAMZIN, V.P.

How we cultivate sandy soils. Zemledelie 27 no.3:43-42 Ag 'cp.  
(MIRA 18-11)

1. Glavnnyy agronom sovkhoza "Dinamo", Klinskogo rayona, Moskovskoy  
oblasti (for Serebryakov). 2. Nauchno-issledovatel'skiy institut  
sel'skogo khozyaystva tsentral'nykh rayonov nechernozemnoy zony  
(for Lamzin).

SEREБRYAKOV, S.P. (Kirov (obl.), ul. Karla Libknekhta d.68, kv.9)

Neglected total rupture of the tendons of the quadriceps femoris  
muscles of both hips. Ortop., travm. i protez. 24 no.11:60-62  
(MIRA 17:10)  
N '63.

1. Iz khirurgicheskogo otdeleniya (nachal'nik - V.S. Chashchina)  
Otdelencheskoy bol'nitsy (nachal'nik - V.P. Timofeyev) stantsiya  
Kirov Gor'kovskoy zheleznoy dorogi.

1. SEREBRYAKOV, S. V.
2. USSR (600)
3. Warehouses
4. Development of a warehouse system in municipal trade. Sov.torg. No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

Name: SEREERYAKOV, Sergey Valentinovich

Dissertation: Organization and techniques of Soviet Trade  
(textbook, Gostorgizdat, 1956)

Degree: Doc Economic Sci

Affiliation: [Not indicated]

Defense Date, Place: 21 Sep 56

Certification Date: 6 Apr 57

Source: BMV0 14/57

YANOVSKII, G. M. YANOVSKII

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•34  
1956

ORGANIZATSIIA I TKE LIKA S YANOVSKII TPG VNI (ORGANIZATION AND  
TYPE SETS OF SOVIET TRADE) MOSKVA, GOSTORGAIZDAT, 1956.

420 P. ILLUS., DIAGS., TABL. S.

BIBLIOGRAPHICAL REFERENCES.

TRAKHTENBERG, Grigoriy Lazarevich; SEREBRYAKOV, S.V., red.

[Methods of studying consumer demand for industrial goods] Metody  
izuchenija pokupatel'skogo sprosa na promyshlennyye tovary, pod  
red. S.V.Serebryakova. Moskva, Gos.izd-vo torgovoy lit-ry, 1957.  
126 p. (MIRA 12:4)

(Russia--Manufactures)

S'EREBOYAKOV, S. V.

GOGOL, B.I., red.; LIFITS, M.M., red.; SEREBRYAKOV, S.V., red. FEFILOV, A.I.,  
red. TYAGAY, Ye., red.; MUKHIN, Yu., tekhn.red.

[Economics of Soviet commerce; a textbook] Ekonomika sovetskoi  
torgovli; uchebnoe posobie. Moskva, Gos.izd-vo polit. lit-ry, 1958.  
391 p. (MIRA 11:2)

(Commerce)

SEREБRYAKOV, S.V., prof., doktor ekonom.nauk; GOGOL', B.I., dotsent;  
[REDACTED] LIPINSKY, M.M., prof.; FEFILOV, A.I., dotsent; KISTANOV, Ya.A.,  
dotsent; GENKINA, L.S., dotsent; VASIL'YEV, S.S., dotsent;  
DNEPROVSKIY, S.P., prof.; PIROGOV, P.V., dotsent; SMOTRINA, N.A.,  
dotsent; KULIKOV, A.G., dotsent; KUZIN, N.I., dotsent; PISKUNOV, V.  
red. ; : MUKHIN, Yu., tekhn.red.

[Economics of Soviet commerce] Ekonomika sovetskoi torgovli;  
uchebnoe posobie. Moskva, Gos.izd-vo polit.lit-ry, 1959. 478 p.  
(MIRA 12:12)

(Russia--Commerce)

SEREBRYAKOV, S., doktor ekon.nauk; KARTASHOVA, K., arkhitektor;  
OBRAZTSOV, A., arkhitektor; FEL'DMAN, I., kand.nauk;  
SHAKULOV, S., kand.ekon.nauk

✓  
Shopping centers in cities. Sov.torg. 33 no.7:7-11  
J1 '60. (MIRA 13:7)  
(Shopping centers)

IL'IN, N., prof., doktor ekonom.nauk; SEREBRYAKOV, S.V. prof., doktor  
ekonom.nauk

"Marketing costs in the U.S.S.R" by M.I.Bakanov. Re-  
viewed by N.Il'in, S.Serebriakov. Sov.torg. 33 no.8:  
38-40 Ag '60. (MIRA 13:8)  
(Marketing—Costs) (Bakanov, M.I.)

GRIGOR'YAN, G.V., dots.; KISTANOV, Ya.A., dots.; FEFILOV, A.I., dots.; GENKINA, L.S., dots.; VASIL'YEV, S.S., dots.; SEREBRYAKOV, S.V., prof.; DNEPROVSKIY. S.P., prof.; PIROGOV, P.V., dots.; GOGOL', B.I., dots.; SMOTRINA, NA., dots.; KULIKOV, A.G., dots.; KUZIN, N.I., dots.; AVETISYAN, Ye., red.; MUKHIN, Yu., tekhn. red.

[Economics of Soviet commerce; textbook] Ekonomika sovetskoi torgovli; uchebnik. Moskva, Gospolitizdat, 1962. 527 p. (MIRA 15:6)

I. Moskovskiy institut narodnogo khozyaystva im. G.V.Plekhanova  
(for Grigor'yan, Kistanov, Fefilov, Genkina, Vasil'yev, Serebryakov, Dneprovskiy, Pirogov, Gogol', Smotrina, Kulikov, Kuzin).  
(Russia—Commerce)

BEK-KAZAROV, P.T., dots.; VASENIN, N.I.; KAMINSKIY, Ya.A., dots.;  
ORLOV, G.F., dots.; PASHKOV, B.I., dots.; SEREBRYAKOV, S.V.,  
prof.; FEL'DMAN, I.M., dots.; STARCHAKOVA, I.I., red.;  
MAMONTOVA, N.N., tekhn. red.

[The organization and techniques of trade]Organizatsiia i tekhnika  
torgovli. [By]P.T.Bek-Kazarov i dr. Moskva, Gostorgizdat,  
(MIRA 16:2)  
1962. 464 p.

1. Nachal'nik ot dela truda i zarabotnoy platy Ministerstva torgovli  
RSFSR (for Vasenin). (Commerce)

GRIGOR'YAN, G.S.[Hryhor'ian, H.S.], dots.; KISTANOV, Ya.A., dots.;  
FEFILOV, A.I., dots.; GENKINA, L.S.[Henkina, L.S.], dots.;  
VASIL'YEV, S.S.[Vasil'iev, S.S.], dots.; SEREBRYAKOV, S.Y.,  
prof.; DNEPROVSKIY, S.P.[Dnieprovs'kyi, S.P.], prof.;  
PIROGOV, P.V.[Pyrohov, P.V.], dots.; COCOL', B.I.[Hohol', BI.],  
dots.; SMOTRINA, N.A., dots.; KULIKOV, O.G.[Kulikov, O.H.],  
dots.; KUZIN, M.I., dots.; DEMIDYUK, V.F.[Demydiuk, V.F.], red.;  
SKVIRSKAYA, M.P.[Skvyrs'ka, M.P.], red.; LEVCHENKO, O.K., tekhn.  
red.; SERGEYEV, V.F.[Serhieiev, V.F.], tekhn. red.

[Soviet trade economics] Ekonomika radians'koi torhivli; pid-  
ruchnyk. [By] G.S.Grigor'ian ta inshi. Kyiv, Derzhpolitydav  
URSR, 1962. 500 p. (MIRA 16:1)

(Russia—Commerce)

GRIGOR'YAN, G.S., prof.; KISTANOV, Ya.A., prof.; FEFILOV, A.I., dots.;  
GENKINA, L.S., dots.; VASIL'YEV, S.S., dots.; SEREBRYAKOV, S.V.,  
prof.; DNEPROVSKIY, S.P., prof.; PIROGOV, P.V., dots.; GOGOL',  
B.I., doktor ekon. nauk; SHOTRINA, N.A., dots.; KULIKOV, A.G.,  
prof.; KUZIN, N.I., dots.[deceased]; AVETISYAN, Ye., red.;  
MUKHIN, Yu., tekhn. red.

[Economics of Soviet trade] Ekonomika sovetskoi torgovli;  
uchebnik. 2., dop. izd. Moskva, Politizdat, 1963. 519 p.  
(MIRA 16:12)

(Russia--Commerce)

L 1307-66 EWT(1)/EWT(m)/EWP(w)/EPF(c)/T/EWP(t)/<sup>EWP(b)/EWA(c)</sup> IJP(c) JD/JW/GG  
ACCESSION NR: AP5012550 UR/0181/65/007/005/1402/1412

AUTHOR: Finkel', V. M.; Savel'yev, A. M.; Zuyev, L. B.; Serebryakov, S. V.; Korobov, Yu. M.; Zuyevo, I. B.

TITLE: Interaction of a crack with dislocation boundaries 72  
SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1402-1412 69  
TOPIC TAGS: crack propagation, crystal lattice energy, lithium fluoride, crystal imperfection 21 21

ABSTRACT: This research was motivated by the lack of published data on the kinetics of interaction between a fast crack and boundaries or subboundaries having different energy levels, or data on the influence of the speed of the crack on the process of overcoming such barriers. There is likewise no information on the time necessary for the crack to break through a subboundary. The authors therefore investigated by polarization-optical and cinematographic methods the breakthrough of slow and fast cracks through screw and inclined subboundaries with different orientations. The investigations were carried out on rock-salt and lithium-fluoride crystals. Samples measuring 0.3 x 0.6 x 2 cm with initial crack 5-7 mm long were tested with and without annealing. The time intervals necessary for the crack to overcome the boundary and the energy involved in this process were determined experimentally and

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ACCESSION NR: AP5012550

calculated theoretically. The motion of a crack was measured both in air and in an etching solution. Fast crack motion was recorded by two means, photoelectrically and by high speed photography. The methods are briefly described. Crack propagation is stopped by the subboundary for a time ranging from  $65 \times 10^{-3}$  sec to as much as  $500 \times 10^{-3}$  sec, depending on the angle and other factors. In the case of screw boundaries the stopping time did not exceed  $16 \times 10^{-6}$  sec. The relation between the time necessary to break through a subboundary and the energy involved is illustrated in Fig. 1 of the Enclosure, where the continuous curve is the result of theoretical calculations and the horizontal lines are experimental values. The results confirmed the theoretical deduction that much more effort is necessary to push a crack in the etching solution than in air. Orig. art. has: 9 figures and 7 formulas.

ASSOCIATION: Sibirskiy metallurgicheskiy institut im. Sergo Orzhonikidze, Novokuznetsk (Siberian Metallurgical Institute) 44-55

SUBMITTED: 01Dec64

ENCL: 01

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ACCESSION NR: AP5012550

ENCLOSURE: 01

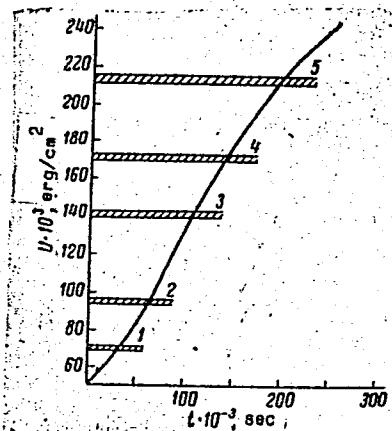


Fig. 1. Graphic interpretation of time necessary for a crack to break through a sub-boundary.

1 - 5 -- Total energy of torsion boundaries with disorientation angles  $2^\circ$ ,  $3^\circ$ ,  $5^\circ$ ,  $6^\circ30'$ , and  $9^\circ$ .

Dependence of the elastic energy of cleaved halves of a crystal, represented in the form of a curve crossing the horizontal levels.

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L 36399-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD

ACC NR: AP6018780 SOURCE CODE: UR/0070/66/011/003/0472/0474

AUTHOR: Finkel', V. M.; Serebryakov, S. V.; Lukin, V. P.

ORG: Department of Physics, Siberian Metallurgical Institute (Kafedra fiziki, Sibirskiy metallurgicheskiy institut)

TITLE: The possibility of the existence of Rayleigh waves in cubic single crystals

SOURCE: Kristallografiya, v. 11, no. 3, 1966, 472-474

TOPIC TAGS: cubic crystal, metalloid alloy, Rayleigh wave, single crystal, elastic wave, elastic stress, metal physics

ABSTRACT: Mathematical conditions for the existence of Rayleigh waves in cubic metal crystals are set forth. The conditions for the propagation of these waves on (100) planes, in [100] directions, were stipulated in terms of the existence of positive roots in the known equation

$$\left(1 - \frac{c_{11}}{c_{11}} R\right) \left(1 - \frac{c_{12}^2}{c_{11}^2} - R\right)^2 = R^2(1 - R),$$

where  $R = \rho c^2 / c_{11}$ ;  $\rho$  is density;  $c$  is speed of the Rayleigh wave;  $c_{11}$ ,  $c_{12}$  and  $c_{44}$  are elastic constants. A similar problem was derived for the (110) planes and [110] directions, since this problem has never been solved quantitatively. The potential energy

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ACC NR: AP6018780

resulting from elastic stress on cubic crystals was given and the coordinates were transformed so that  $x$  and  $y$  laid in the (110) plane and  $z$  was normal to the plane. The stress components were obtained by partial differentiation of the potential energy with respect to the strain components. The mathematical conditions for the existence of the Rayleigh waves were developed for two cases:

$$\epsilon_{xy} = \epsilon_{yz} = \epsilon_{zx} = 0, \partial/\partial z = 0$$

this corresponding to the wave propagation in the [110] direction on the (110) plane; and the propagation of the waves in the [100] direction on the (110) plane. Calculations were made on the basis of the above mathematical conditions and 33 metallic and nonmetallic single crystals were tabulated, the results giving the existence or nonexistence of the Rayleigh waves for (100) and (110) planes and [100] and [110] directions. Orig. art. has: 1 table, 14 formulas.

SUB CODE: 20,11/ SUBM DATE: 29Apr65/ ORIG REF: 001/ OTH REF: 004

Card 2/2 M/F

SEREBRYAKOV, V., mayor; KLOKOV, V., kapitan, instruktor

Great achievements of the Communist Youth Leaguers. Kom. Vooruzh. -  
Sil. I no.6:37-39 Mr '71. (MIRA 14:8)

1. Pomoshchnik nachal'nika politupravleniya po komsomol'skoy rabote  
(for Serebryakov). 2. Komsomol'skiy otdel politupravleniya (for  
Klokov).

(Russia--Army)

L62523-65

ACCESSION NR: AP5015075

UR/0242/65/000/004/0030/0033

8  
BAUTHOR: Serebryakov, V. A. (Head epidemiologist)

TITLE: Problems of diphtheria control in Uzbek SSR

SOURCE: Meditsinskiy zhurnal Uzbekistana, no. 4, 1965, 30-33

TOPIC TAGS: diphtheria, disease control

ABSTRACT: From 1958 to 1963 diphtheria incidence decreased by 25 times in Uzbek SSR and by 100 times in the city of Tashkent. In further planning of diphtheria control programs, three factors should be taken into consideration by the public health and epidemiological services of Uzbek SSR. First, many Soviet republics have been more successful in reducing diphtheria in recent years, for example, in some parts of the Ukrainian SSR diphtheria has practically disappeared. Secondly, in 1964 the decrease in diphtheria incidence was sharply retarded in many parts of Uzbek SSR, and in some parts diphtheria incidence even rose slightly. Moreover, in some rural areas there were diphtheria outbreaks indicating increased circulation of highly virulent strains of the causative agent. Thirdly, the severity of

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L 62523-65

ACCESSION NR: AP5015075

the clinical course of diphtheria has increased and the number of fatal cases has also increased. An analysis of diphtheria control methods in Uzbek SSR shows a need for improving the quality of diphtheria vaccinations, increasing efforts in identification of disease carriers, and hospitalizing persons with suspicious symptoms. Orig. art. has: 1 table.

ASSOCIATION: Ministerstvo zdravookhraneniya UzSSR (Ministry of Health UzSSR)

SUBMITTED: 14 Sep 64 ENCL: 00

SUB CODE: LS

NR REF SOV: 000 OTHER: 000

KC  
Card 2/2

39156  
S/120/62/000/003/020/048  
E039/E135

9.3280 (also 2301, 2901)

AUTHORS: Andreyev, S.I., Vanyukov, M.P., and Serebryakov, V.A.

TITLE: The use of ferrites for the generation of powerful high voltage pulses of nanosecond duration

PERIODICAL: Pribory i tekhnika eksperimental'nye, no.3, 1962, 89-92

TEXT: The characteristic sharp change in the value of the magnetic permeability  $\mu$  of ferrites with increasing magnetic field causes the generation of a high voltage pulse  $U_p$  when a ferrite element is included in a spark discharge circuit

$$U_p = L_o \mu(t) \frac{di}{dt}$$

where:  $L_o$  is the inductance of the ferrite element at  $\mu = 1$ ;  $di/dt$  is the rate of change of current in the circuit. The ferrites (Ni, Zn)  $\phi$ -600 (F-600),  $\phi$ -1000 (F-1000),  $\phi$ -2000 (F-2000), (MgZn) MT-2000 (NT-2000) and ferrites with rectangular loops are investigated. There appears to be little difference between the voltage pulses obtained using Ni, Zn group and the ferrites with rectangular loops. Amplitude and duration characteristics of the

Card 1/2

The use of ferrites for the generation.. S/120/62/000/003/020/048  
E039/E135

pulses produced by the ferrites F-2000 and MT-2000 are investigated in more detail. It is shown that voltage pulses of  $\sim 10$  kV and lasting a few nanoseconds can be produced across a  $100 \Omega$  resistance using F-2000 (i.e. 1 Megawatt pulse) with a discharge capacity of  $3300 \mu\text{f}$  and inductance 0.1 phenry. Pulse lengths of  $\sim 30$  nanoseconds are obtained using the ferrite MT-2000 but at a much lower voltage. The effect of circuit parameters on amplitude, duration and frequency of pulses is described in detail. There are 5 figures.

ASSOCIATION: Gosudarstvennyy opticheskiy institut  
(State Optical Institute)

SUBMITTED: September 21, 1961

Card 2/2

L 10524-63

EWA(k)/EMT(1)/FBD/T-2/3W2/BDS/EEC(b)-2/ES(t)-2--AFPTC/ASD/  
ESD-3/RADC/APGC/AFWL--PL-4/Po-4--JHB/WG/K/EH/IJP(C)

ACCESSION NR: AP3000040

S/0056/63/044/005/1493/1496

AUTHOR: Vanyukov, M.P.; Isayenko, V. I.; Serebryakov, V. A.

82

81

25

TITLE: Investigation of directivity of emission of an optical quantum generator

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1493-1496

TOPIC TAGS: laser, emission direction, rod cross section, neodymium-doped glass

ABSTRACT: Neodymium-doped glass rods with cross sections of various shapes have been studied to determine the effect of the shape on the directional properties of laser emission. The polished ends of the samples received a dielectric coating. The samples were pumped by two pulsed lamps, and the emission was detected by an electron-optical image converter. The distribution of oscillation zones in the rod was photographed. The results show the stimulated emission from rods of square, rectangular, and octagonal cross section can be propagated in several discrete directions. The presence of these directions is

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L 10524-63

ACCESSION NR: AP3000040

attributed to the formation of additional closed paths of oscillator beams as a result of multiple reflections from parallel side walls. Emission from rods of circular cross section is propagated in only one principal direction, perpendicular to the end faces. Orig. art. has:6 figures.

ASSOCIATION: Gosudarstvennyy opticheskiy institut (State Institute of Optics)

SUBMITTED: 12Dec62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH, SD NO REF SOV: 001 OTHER: 001

mcs/CA  
Card 2/2

SEREБRYAKOV, V.A.

Sodium potassium feldspars with unusual structure and optical  
properties. Geol. i geofiz. no.6:136-141 '64.  
(MIRA 18:11)  
1. Severo-Vostochnoye geologicheskoye upravleniye, Magadan.

L 59191-65 EEC(b)-2/EWG(r)/EEC(k)-2/EWA(h)/EWA(k)/EMP(k)/ENT(1)/ENT(m)/FBD/EMP(1)/  
EMP(b)/T/EWA(m)-2/EMP(e) PF-1/PI-1/PI-1/Pm-1/Pm-1/Po-1/Po-1/Po-1  
ACCESSION NR: AR5017554 WH/WG SCTB/IJP(c)  
UR/0058/65/000/006/H008/H009

SOURCE: Ref. zh. Fizika, Abs. 6Zh58

AUTHORS: Vanyukov, M. P.; Isayenko, V. I.; Serebryakov, V. A.; Stepanov, B. I.

TITLE: Noise density in a neodymium glass laser

CITED SOURCE: Zh. Tekn. spektroskopii, v. 1, no. 2, 1964, 141-147

TOPIC TAGS: laser, neodymium glass laser, noise density, laser power, laser operation

TRANSLATION: The authors investigated the dependence of the laser generation power on the mirror reflection coefficient and on the pump power. An analysis of the results has made it possible to estimate the influence of the noise on the generation power. It is shown that the noise density  $u_n$  is connected with the pump radiation density in the following fashion

$$u_n = a + bB(u_{\text{pump}} - u_{\text{thr}})$$

where  $a$  and  $b$  are constants that depend on the dimensions of the rod and of the side surfaces;  $u_{\text{thr}}$  is the threshold pump density. A cylindrical rod of neodymium glass with length  $l = 14$  cm and diameter  $d = 1.5$  cm was investigated. One of the

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ACCESSION NR: AR5017554

mirrors was dense, with a transmission coefficient  $T = 5\%$ . The output mirror was interchangeable and could have transmission coefficients 9, 19, 40, 48, 60, and 79%. The authors investigated the dependence of different laser parameters on the value of the useful losses connected with the different transmission coefficients of the output mirror. Such parameters were: the lasing time, the time interval between the turning on of the pump lamp and the start of lasing, the lasing flux density, the noise density, etc. It is noted that the magnitude of the noise in the working medium of quantum generators is quite large, and no accurate description of the generation processes can be obtained without account of the noise.

A. Grasyuk.

SUB CODE: EC

ENCL: 00

Card 2/2

SEREБRYAKOV, V.A.

High-alumina minerals in the granites of the Uralo-Sib. Massif.  
Geol. i geofiz. no.3:7,-68 '64. (MIRA 12:7)

1. Severo-Vostochnoye geologicheskoye upravleniye, g. Magadan.

L 17143-65 EWA(k)/EWT(1)/EEC(k)-2/T/EEC(b)-2/EWP(k)/EWA(m)-2 Po-4/PT-4/  
ACCESSION NR: AP5000558 Pl-4/Pl-4 IJP(c) S/0051/64/017/006/0954/0956  
RAEM(a) WG/JHB

AUTHOR: Vanyukov, M. P.; Isayenko, V. I.; Serebryakov, V. A.

TITLE: Experimental verification of the Stepanov formula for the yield of stimulated emission from a resonator

λ

SOURCE: Optika i spektroskopiya, v. 17, no. 6, 1964, 954-956

TOPIC TAGS: laser emission, light yield, laser resonator, laser output analysis

ABSTRACT: A formula derived by B. I. Stepanov (DAN SSSR v. 148, 74, 1963) for the yield of stimulated emission from a resonator, in case of samples operating in the stationary generation mode, was checked experimentally. The objects of the investigation were cylindrical samples of glass activated with neodymium, operating at room temperature. The sample was placed in a resonator with external dielectric-coating mirrors. One mirror was permanent and had a transmission coefficient 0.5%, while the output mirror was interchangeable and had a transmission coefficient 10 to 80%. The experiments were made with samples 140 and 370 mm long. To eliminate differences in the

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L 17143-65  
ACCESSION NR: AP5000558

properties of the samples, the short sample was made from the long sample after the experiments with the latter were completed. The light energy of each flash was registered with a calorimeter accurate to 10%. Each flash lasted 0.5 -- 1.0 msec and consisted of a large number of individual spikes. The results show that in order to compare the experimental data with the Stepanov formula it is necessary to take into account the average duration of the radiation pulse and to suitably modify the theoretical curves to yield the time dependence of the averaged values of the light flux. Further tests in checking the parameters of the Stepanov formula are being planned. Orig. art. has: 2 figures and 6 formulas.

ASSOCIATION: None

SUBMITTED: 18Apr64

ENCL: 00

SUB CODE: OP, EC      NR REF Sov: 004

OTHER: 000

Card 2/2

ACCESSION NO. AP4031135

S/0056/64/046/004/1182/1187

AUTHOR: Vanyukov, M. P.; Isayenko, V. I.; Serebryakov, V. A.

TITLE: Time variation of the intensity of stimulated radiation in various lateral modes

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 4, 1964, 1182-1187

TOPIC TAGS: stimulated radiation, radiation intensity, radiation intensity variation, lateral radiation mode, radiation intensity time variation, axial radiation mode, lateral mode generation, axial mode generation, stimulated radiation, neodymium activated glass, activated glass, resonator, polarized radiation

ABSTRACT: Spatial and time relationships between the axial and some lateral modes of stimulated radiation were investigated by using an apparatus in which the emission from a neodymium glass ( $\lambda = 1.06 \mu$ ) is directed toward a lens in the focal plane of which is the photocathode of an image converter. The optical system with its auxiliary photographic system is shown in Fig. 1 of the Enclosure for a case

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ACCESSION NO. AP4031135

wherein the emission leaving the glass specimen is separated into two beams. Fig. 2 shows the distribution of various oscillation modes. A comparison of the data obtained with determinations made by an analytical formula connecting the wave number of a vector with the linear-resonator dimensions shows that the theory of resonators does not explain all the data obtained. However, the importance of polarized radiation in the lateral modes is emphasized. Original art. has: 5 figures and 4 formulas.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova  
(State Institute of Optics).

SUBMITTED: 31Aug61 DATE ACQ: 07May64 ENCL: 02

SUB CODE: PH NO. REF. SOV: 002 OTHER: 003

Card 2/4

L 20291-65 EWG(j)/EWA(k)/FBD/EWT(l)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(h)/  
EWA(m)-2 Pn-4/Po-4/Pf-4/Peb/Pi-4/Pl-4 IJP(c)/SSD/BSL/AFWL/ASD(a)-5/ASD(s)/AFETR/  
AFTC(p)/RAEM(a)/ESD(gs)/ESD(t) WG  
ACCESSION NR: AP5001819 S/0056/64/047/006/2019/2021

AUTHOR: Vanyukov, M. P.; Isayenko, V. I.; Serebryakov, V. A.

TITLE: Stimulated radiation connected with complex oscillation modes

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,  
no. 6, 1964, 2019-2021

TOPIC TAGS: laser, laser crystal, laser oscillation mode, laser complex mode

ABSTRACT: Proceeding from earlier works by R. A. Laff, W. P. Dumke, and others (IBM 5. Res. and Developm. 7, 1963, 63) and of R. J. Collins and J. A. Giordmaine (Proc. 3rd Intern. Congress on Quantum Electronics, Dunod, Paris, 1964, 1239), the authors continue their own investigations of the problem of lateral oscillation modes in laser crystals. The article deals with an experimental study of complex oscillation modes having an angular distribution of radiation not studied previously. The radiation of a neodymium-activated glass sample was photographed through an electron-optical transducer. Photographs of the end faces of samples with square and rectangular cross sections were

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L 20291-65

ACCESSION NR: AP5001819

made, and the geometry of a typical light path within the rectangular specimen was analyzed in a drawing. The formation of complex modes is attributed to the formation of closed radiation paths within the specimens, each of which has its own plane and pattern of multiple reflections from the several pairs of parallel walls. The planes of the paths are perpendicular to the end faces. The points of emergence of the rays from the end faces form symmetrical patterns relative to the center line of the specimen. The authors propose that the relative nonparallelism (1 to 3') of the side walls of the specimen is responsible for the limited number of paths. Orig. art. has: 3 figures.

ASSOCIATION: Opticheskiy institut im. S. I. Vavilova (Optical Institute)

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 002 ATD PRESS: 3162

Card 2/2

L 42940-66 EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(k) IJP(c) WG/WR  
ACC NR: AP6030175 SOURCE CODE: UR/0237/66/000/008/0001/0004

AUTHOR: Azin, V. A.; Vanyukov, M. P.; Isayenko, V. I.; Serebryakov, V. A.; Shorokhov, O. A.

ORG: none

TITLE: An Nd-glass laser with a smooth displacement of the spectral emission band

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 8, 1966, 1-4

TOPIC TAGS: solid state laser, neodymium laser, glass laser, laser output, laser efficiency

ABSTRACT: Piecewise continuous narrowing of the emission spectrum of a Q-switched Nd-glass laser at 0.2—0.3 nm was achieved experimentally without appreciable loss of efficiency by inserting the Fabry-Perot etalon inside the resonant cavity. The experimental setup is shown in Fig. 1. The KGSS-7<sup>1</sup> neodymium-glass rod used was 240 mm long and 15 mm in diameter. A rotating prism ( $30 \times 10^3$  rpm) Q-switch and a 1-m resonator produced a 3-j single pulse with a duration of ~40 nanosec. The spectral separation was achieved by means of an F-P etalon whose mirrors were 95% reflective. Another F-P etalon with 40% reflectivity and inclined at an angle  $\psi$  to the resonator axis was used as a spectral selector. The output mirror was either an F-P etalon with non-coated quartz plates (13% reflective) or a dielectric mirror. The variation of the spectral emission band and energy of a single-pulse laser as a function of  $\psi$  were

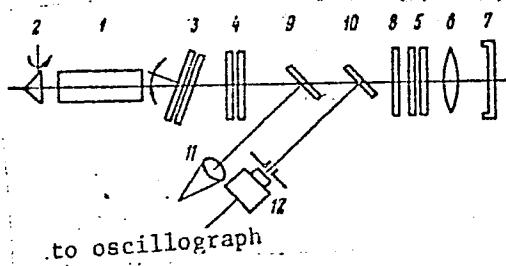
UDC: 621.378.325

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L 42940-66

ACC NR: AP6030175

Fig. 1. Experimental setup



1 - Neodymium glass rod; 2 - prism;  
 3 - F-P etalon with reflection coefficient  
 $R = 40\%$ ; 4 - F-P etalon without reflective  
 coating (in some experiments a dielectric  
 mirror ( $R = 13\%$ ) was substituted); 5 -  
 spectral separator F-P etalon with  $R = 95\%$ ;  
 6 - objective; 7 - camera; 8 - dull plate  
 and neutral filters; 9, 10 - light separating  
 plates; 11 - calorimeter; 12 - photocell.

shown graphically. Emission spectra of a single laser pulse for various  $\psi$  (120', 240', and 300') and the smooth displacement of the emission band in the free generation mode are shown. The experimental data indicate the following: 1) spectral narrowing to 0.2–0.3 nm occurred without a loss in the single pulse laser efficiency when an F-P etalon with uncoated plates was used as an output mirror; 2) simultaneous use of two etalons makes it possible to narrow the emission spectrum of a single pulse laser down to 0.01 nm; 3) use of an F-P etalon with coated plates inside the resonant cavity ensures smooth displacement of the spectral band within the 5–7 nm

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L 42940-66

ACC NR: AP6030175

range for both free and Q-switched generation; 4) when the spectral band is displaced, the energy of a single pulse laser goes through several maxima which are spaced by a distance  $\Delta\lambda$  equal to the resonator constant. Orig. art. has: 5 figures.  
[YK]

SUB CODE: 20/ SUBM DATE: 08Jan66/ ORIG REF: 001/ OTH REF: 004/ ATD PRESS: 5069

Card 3/3 MLP

L 20618-66 FBD/EWT(1)/EWP(s)/EWT(m)/EEC(k)-2/ETC(f)/EPF(n)-2/ENG(m)/T/EWP(k)/  
ACC NR: AP6012184 EWA(h) IJP(c) SOURCE CODE: UR/0386/66/003/008/0316/0318  
WG/AT/WH 96  
AUTHOR: Vanyukov, M. P.; Isayenko, V. I.; Lyubimov, V. V.; Serebryakov, V. A.; B  
Shorokhov, O. A.

ORG: none

TITLE: Use of a laser operating in the spike mode to obtain a high-temperature plasma 21

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.  
Prilozheniya, v. 3, no. 8, 1966, 316-318

TOPIC TAGS: laser application, laser pulsation, neodymium glass, high temperature plasma, discharge plasma, gas ionization

ABSTRACT: Since the use of a laser for gas ionization or production of a high-temperature plasma is usually limited to light pulses of duration  $10^{-7}$ - $10^{-8}$  sec, and for certain applications, say to accelerate chemical reactions, it may be of interest to obtain longer action of the electromagnetic field of the light wave on the plasma, the authors have experimented with ionization of air with the aid of radiation from a laser operating in the spike mode, with total generation duration of about one millisecond. The neodymium-glass laser used in the investigation yielded light pulses with energy 800-1400 J. Neodymium-glass rods of 45 mm diam-

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L 20618-66  
ACC NR: AP6012184

eter and 600 mm long were used, with 2 and 4 per cent concentration of Nd<sub>2</sub>O<sub>3</sub>. An elliptic illuminator with six conjugate ellipses and straight pump flash lamps was used. The average laser radiation power, at a flash duration 0.8—1.2 msec, was 1—2 Mw, but, taking into account the off-duty factor between spikes, the maximum radiation power could reach 10—30 Mw. When this radiation was focused in air with a 100 mm focus lens a power density 1—3 Gw/cm<sup>2</sup> and a field intensity of the order of 10<sup>7</sup> v/cm were obtained, enough to produce a high-temperature plasma in air. Photographs show that the plasma produced by the gas breakdown is optically opaque and that the laser emission of 1.06  $\mu$  wavelength is absorbed in the thin front layer of the cloud. Orig. art. has: 1 figure. [02]

SUB CODE: 20/ SUBM DATE: 24Feb66/ ORIG REF: 001/ OTH REF: 001  
ATD PRESS: 4225

Card 2/2 BK

L 23409-66 FBD/EWT(1)/EWP(e)/EWT(m)/EFC(k) 2/T/EWP(k)/EWA(h) IJP(c) WG/WH  
ACC NR: AP6011652 SOURCE CODE: UR/0020/66/167/003/0547/0548 44

AUTHOR: Vanyukov, M. P.; Dmitriyevskiy, O. D.; Isayenko, V. I.; Serebryakov, V. A. B

ORG: none 6.44

TITLE: Fast-operating liquid Q-switch shutter for neodymium glass laser 25.44

SOURCE: AN SSSR. Doklady, v. 167, no. 3, 1966, 547-548

TOPIC TAGS: laser Q switch, solid state laser, neodymium glass laser

ABSTRACT: An investigation was made of the use of 3,3-diethyl-9,11,15,17-dineopentylenethiapentacarbocyanine iodide dye as a fast-operating shutter in a glass laser with a trivalent neodymium ion as activator. The emission falls on the longwave edge of the absorption band of the dye, whose maximum is at 980 m $\mu$ . A neodymium glass rod 15 mm in diameter and 240 mm in length was used. The dye in a plane-parallel cuvette 20 mm long, was placed inside the resonator, which had external mirrors spaced at 1 m. The cuvette was situated between the generating rod and the exit mirror. The giant pulse energy was 1.5 joule, and the duration of the pulse did not exceed  $25-30 \times 10^{-9}$  sec. The laser spectrum in transition to a single mode narrowed from 50 to 6-8 Å. Both the threshold of giant pulse generation and its energy depended on the optical density of the solution. The single pulse generation appeared when the concentration of the solution was larger than  $4 \times 10^{-5}$  mol/l. At lower concentrations, free generation was observed. The energy of the single pulse

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UDC: 621.378.325

2

L 23409-66

ACC NR: AP6011652

increased with the concentration up to some value of concentration after which the increase of energy leveled off. It was found that the value of optimum transmission coefficient for the free generation mode, for the generation of several pulses (solution concentration  $3.3 \times 10^{-5}$  mol/l), and for the generation of single pulses (concentration  $11 \times 10^{-5}$  mol/l) was approximately the same. Orig. art. has: 3 figures

[JA]

SUB CODE: 20/ SUBM DATE: 14Jun65/ ORIG REF: 005/ OTH REF: 002/ ATD PRESS:

4234

Card 2/2 older

ACC NR: AP7002725

SOURCE CODE: BR/0237/66/000/012/0065/0065

AUTHOR: Vanyukov, M. P. (Doctor of sciences); Venchikov, V. A.; Isayenko, V. I.;  
Serebryakov, V. A.

ORG: none

TITLE: A 6-Gw neodymium glass laser

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 12, 1966, 65

TOPIC TAGS: solid state laser, neodymium glass, ~~passive~~ giant pulse laser, Q switching,  
passive switching, ~~polymethine~~ dye ~~chemical~~

ABSTRACT: A 6-Gw neodymium glass laser with a simple phototropic Q-switch is described. The laser consists of three cylindrical rods in series, each 250 mm long and 45 mm in diameter. Each rod is placed in a multielliptic reflector and is pumped by six direct flashlamps. The external cavity consists of one 99.6%-reflective dielectric mirror and a Q-switch placed between the first and second rods. The Q-switch consists of a cell made of two plane-parallel (error less than 1 min of arc) glass plates joined optically through a 1-cm-thick glass ring. The cell is filled with a polymethine-dye solution to a concentration at which the solution is 99% reflective at 1.06  $\mu$ . At maximum pumping energies, single 100-120-j, 20-nanosec pulses were obtained. By increasing the pumping energy or by

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UDC: 621.378.324:621.376

ACC NR: AP7002725

diluting the absorber solution, two or more pulses could be generated. In the case of two-pulse operation (50-80 nanosec repetition frequency), the total output was 200 j. The use of a phototropic liquid switch and large-diameter neodymium glass rods resulted in energy and power densities of  $6 \text{ J/cm}^2$  and  $0.3-0.4 \text{ Gw/cm}^2$ , respectively.

SUB CODE: 20/ SUBM DATE: 270ct66/ ORIG REF: 004/ OTH REF: 001 / ATD PRESS: 5111

Card 2/2

SEREBRYAKOV, V.A.

Role of the alimentary factor in the etiology of chronic  
diseases of the Liver. Trudy Inst. kraev. med. AN Tadzh. S  
(AlTA 17:5)  
SSA no.1:200-216 191.

SEREBRYAKOV, V.A., student; ISFAS, B.S., dotsent, nauchnyy  
rukovoditel' raboty

Possible improvements of the crawler drive of mine vertical  
conveyors. Sbor.dokl.Stud.nauch.cb-va Fak.mekh.sel'. Kuib.sel'  
khoz.inst.no.1:140-141 '62. (MIRA 17:5)

1. Kuybyshevskiy sel'skokhozyaystvennyy institut.

SEREБRYAKOV, V.A., kand.ekon.nauk; KLIMENKO, K.I., doktor ekonom.nauk,  
nauchnyy red.; KHOTEEV, A.A., red.izdatel'stva; GUBIN, M.I., tekhn.  
red.

[Ways of saving metal in the Soviet machinery industry] Puti  
ekonomii metalla v mashinostroenii SSSR. Moskva, Izd-vo "Znanie,"  
1957. 46 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politi-  
cheskikh i nauchnykh znanii. Ser.3, no.26) (MIRA 10:12)  
(Machinery industry)

SEREБRYAKOV, V.A.

Origin of myrmekites. Zap.Vses.min.ob-va 92 no.1:98-103 '63.  
(MIRA 16:4)

1. Severo-vostochnoye geologicheskoye upravleniye, g. Magadan.  
(Myrmekite)

SEREБRYAKOV, V.A.

Autometasomatic granitoids and the relationship between tin showings  
and the zone of sodium-potassium metasomatism. Sov. geol. 2 no.8:61-80  
(MIRA 13:2)  
Ag '59.

1. Severo-Vostochnoye geologicheskoye upravleniye.  
(Granite) (Metasomatism)

SEREБRYAKOV, V. A.

34077. Baylov, S. V. i Serebryakov, V. A. mnogoplodie karakulackikh ovets v usloviyakh yugo ukrainy. Karakulievodstvo i zverovodstvo, 1949, No. 5, s. 11-15

SO: Knizhuaya, Letopis', Vol. 7, 1955

SEREБRYAKOV, V. A.

PA 241T21

USSR/Medicine - Infectious Diseases

Jan. 53

"Effects of Exhaustion and Exposure to Cold on the Resistance of Guinea Pigs to Infection With Typhus," V. A. Serebryakov, Sh. M. Ostrovskaya, Tadzhik Inst of Epidemiol, Microbiol, and Sanitation

"Zhur Mikrobiol, Epidemiol, i Immunobiol" No 1,

p 73

Exhaustion and exposure to cold increase the percentage of guinea pigs infected with an average dose of the local passage strain of epidemic typhus C. They also increase considerably the percentage

241T21

of animals infected with a dose lower than the average (i.e. one which normally does not produce infection).

241T21

KOVALEVSKAYA, A.N.; KORETSKAYA, L.S.; SEREBRYAKOV, V.A., direktor.

Effectiveness of vaccinotherapy of bacterial dysentery in children. Vop.pediat.  
21 no.4:17-18 Jl-Ag '53. (MLRA 6:10)

1. Tadzhikskiy institut epidemiologii, mikrobiologii i gigiyeny.  
(Dysentery) (Vaccination)

SEREBRYAKOV, V.N.; OSTROVSKAYA, Sh.M.

Two cases of "lice-less typhus." Zhur.mikrobiol.epid.i immun. no.2:  
70 F '54. (MIRA 7:3)

1. Iz Stalinabadskogo instituta epidemiologii, mikrobiologii i  
sanitarii. (Typhus fever)

SEREБRYAKOV, V.A.

Some problems in the theory and practice of smallpox vaccination  
in Tajikistan. Zdrav. Tadzh. 3 no.2:8-12 Mr-Ap '56. (MIRA 12:7)

1. Iz Stalinabadskogo instituta epidemiologii i gigiyeny (dir. -  
dotsent M.Ya. Rasulov).  
(TAJIKISTAN--SMALLPOX)

LEBEDEVA, Yuliya Aleksandrovna; SEREBRYAKOV, Vladimir Aleksandrovich;  
KANEVSKAYA, M.D., red.; GERASIMOVA, V.N., tekhn.red.

[Bacteriological weapons of foreign armies and protection against  
them] Bakteriologicheskoe oruzhie inostrannykh armii i zashchita ot  
nego. Moskva, Izd-vo DOSAAF, 1957. 119 p.  
(MIRA 11:2)  
(Bacterial warfare)

SEREHRYAKOV, V.A., kand.med.nauk

Success in controlling. Zdrav.Tadzh. 4 no.6:12-16 N-D '57.  
(MIRA 11:4)

1. Zamestitel' ministra zdorovookhraneniya Tadzhikskoy SSR.  
(TAJIKISTAN--COMMUNICABLE DISEASES)

BABKIN, I.A.; BOGOLYUBSKIY, G.N.; BURLINOV, I.I.; VOZNESENSKIY, V.V.; DANILYUK, V.S.; ZAPOL'SKIY, G.N.; ZUBKIN, A.S.; IL'YASHEV, A.S.; KIPRIYAN, K.M.; KONDRAT'YEV, P.V.; KORABLEV, M.D.; LEBEDEVA, Yu.A.; MAKAROV, Yu.K.; MIROSHNIKOV, I.P.; NOVICHENKO, I.P.; POPOV, A.V.; SEREBRYAKOV, V.A.; KANEVSKAYA, M.D., red.; ANDRIANOV, B.I., tekhn.red.

[Protecting the public from present-day means of destruction; a textbook for organizations of the All-Union Voluntary Society for the Promotion of the Army, Aviation, and Navy] Zashchita naseleniya ot sovremennoykh sredstv porazheniya; uchebnoe posobie dlja organizatsii Vsesoyuznogo dobrovolskogo obshchestva sodeystviya armii, aviacii i flotu. Moskva, Izd-vo DOSAAF, 1958. 334 p. (MIRA 1274)  
(Civil defense)

SEREBRYAKOV, V.A.; ZATSEPIN, N.I.

Pressing problems in the control of acute intestinal diseases  
in the Tajik S.S.R. Zdrav.Tadzh. 6 no.1:14-19 Ja-F '59.  
(MIRA 12:10)

1. Zam.ministra zdravookhraneniya Tadzhikskoy SSR (for Serebryakov).
2. Zamestitel' direktora Stalinabadskogo instituta epidemiologii  
i gigiyeny (for Zatsepin).  
(TAJIKISTAN--INTESTINES--DISEASES)

SEREБRYAKOV, V.A.

Out-of-town session of the N.A. Semashko Institute on the Organization  
of Public Health and the History of Medicine. Zdrav.Tadzh. 6 no.5:  
43-44 '59. (MIRA 13:3)

(PUBLIC HEALTH)

SEREБRYAKOV, V.A.; PAVLOVICH, A.N.

Ways of eliminating typhus in Tajikistan. Zdrav. Tadzh. 6 no.6:  
8-14 '59. (MIRA 13:4)

1. Iz Stalinabadskogo Instituta epidemiologii i gigiyeny.  
(TAJIKISTAN--TYPHUS FEVER)

SEREБRYAKOV, V.A.; TADZHIYEV, Ya.T.

Prospects for the further development of the public health system  
in the Republic. Zdrav. Tadzh. 7 no.4:14-18 Jl-Ag '60.  
(MIRA 13:9)

1. Iz Instituta krayevoy meditsiny Akademii nauk Tadzhikskoy SSR.  
(TAJIKISTAN—PUBLIC HEALTH)

SEREБRYAKOV, V.A.; BARATOV, K.B.

Changes in the dietary habits of the rural population of Tajikistan during their migration from mountainous locations to the valleys. Vop. pit. 19 no.2:9-12 Mr. Ap '60. (MIRA 14:7)

1. Iz otdela gigiyeny (zav. K.B. Baratov) Instituta epidemiologii i gigiyeny Ministerstva zdravookhraneniya tadzhikskoy SSR, Stalinabad. (TAJIKISTAN--DIET)

SEREBRYAKOV, V.A.

Okandzha granitoid massif and a comparison of it with Ch'orgo  
massif in the basin of the upper Kolyma River. Izv. vys. ucheb.  
zav.; geol. i razv. 4 no.1:41-57 Ja '61. (MIRA 14:7)

1. Severo-Vostochnoye geologicheskoye upravleniye.  
(Kolyma Valley—Granite)

SEREBRYAKOV, V.A.

Nutrition and health of workers of leading collective farms in the  
Bakhsh Valley. Vop. pit. 20 no. 1:8-14 Ja-F '61. (MIRA 14:2)

1. Iz Instituta krayevoy meditsiny AN Tadzhikskoy SSR, Stalinabad.  
(BAKHSH VALLEY--NUTRITION)

SEREBRYAKOV, V.A.; CHERNAKOV, M.G.

Improving working conditions in sintering plants. Metallurg  
8 no.1:11 Ja '63. (MIRA 16:1)

1. Zamestritel' nachal'nika aglofabriki Chelyabinskogo  
metallurgicheskogo zavoda (for Serebryakov). 2. Starshiy  
inzhener Osobogo tekhnicheskogo byuro Cheblyabinskogo  
metallurgicheskogo zavoda (for Chernakov).

(Iron and steel workers--Diseases and hygiene)  
(Sintering)

L 22955-66 EWP(k)/EWT(m)/T/EWA(d)/EWP(v)/EWP(t) IJP(c) JD/HM  
ACC NR: AP6006406

SOURCE CODE: UR/0413/66/000/002/0146/0147

AUTHOR: Filin, N. A.; Kozlov, D. A.; Serebryakov, V. F.; Rusin, A. I.; Batin, A. P.

ORG: none

TITLE: Thermal diffusion method of lead coating of aluminum and its alloys. Class  
48, No. 178259 27 27

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 146-147

TOPIC TAGS: metal diffusion plating, aluminum, metal coating, thermal diffusion, lead

ABSTRACT: An Author Certificate was issued for the lead coating of aluminum and its alloys in molten lead, treated with flux. To obtain a uniform diffusion layer with a strong metal-to-base bond, the aluminum surface is cleared from the oxide film in flux containing 81% lead, 10% potassium chloride, and 9% lithium chloride. The aluminum is then saturated with lead containing 0.08 -- 0.1 calcium at 420C and a minimum holding time of 3 minutes. [LD]

SUB CODE: 11/ SUBM DATE: 11Apr64

Card1/l 10

UDC: 621.793.6

SEREБRYAKOV, V.G., mladshiy nauchnyy sotrudnik (Saratov, Komsomol'skaya  
ul. d. 35, kv.1)

Abstracts. Ortop., travm. i protez. 25 no.11:69-70 N°64.  
(MIRA 18:11)

1. Iz Saratovskogo instituta travmatologii i ortopedii (dir. -  
dotsent Ya.N. Rodin). Submitted December 23, 1963.

SEREBRYAKOV, V.G.

Histological examination of the hip joint following arthroplasty  
with skin grafting. Vest.khir. 89 no.8:68-70 Ag '62.  
(MIRA 15:10)

1. Iz kliniki ortopedii dlya vzroslykh (zav. - dotsent A.Ya.  
Demindov) i patologoanatomiceskoy laboratorii (zav. - kand. med.  
nauk L.S.Monogenova) Saratovskogo nauchno-issledovatel'skogo  
instituta travmatologii i ortopedii.  
(HIP JOINT—SURGERY) (SKIN GRAFTING)

SEREBRYAKOV, V.G., mladshiy nauchnyy sotrudnik (Saratov, Komsomol'skaya  
ul. d. 35, kv.1)

Arthroplasty of the knee joint with interposition of skin flaps.  
Ortop., travm. i protez. 25 no.1:21-24 Ja '64. (MIRA 17:9)

l. Iz Saratovskogo instituta travmatologii i ortopedii (dir. -  
dotsent Ya. N.Rodin).

SEREBRYAKOV, V.G.

Experimental arthroplasty of the knee joint with interposition of a skin autograft. Eksper. khir. i anest. 9 no.1:55-57 Ja-F '64.  
(MIRA 17:12)

I. Otdeleniye ortopedii vzroslykh (zav. - dotsent A.Ya.Demidov) i patologo-anatomicheskaya laboratoriya (zav. - kand. med. nauk L.S. Monogenova) Saratovskogo nauchno-issledovatel'skogo instituta travmatologii i ortopedii (dir. - dotsent Ya.N.Rodin).

SEREБRYAKOV, V.G. (Saratov, Komsomol'skaya ul., 35, kv. 1)

Anthroplasty of the hip joint with interposition of autoplasic  
skin grafts. Vest. khir. 92 no.1:48-53 Ja '64. (MIRA 17:11)

1. Iz kliniki ortopedii dlya vzroslykh (zav.- dotsent A.Ya.  
Demidov) Saratovskogo nauchno-issledovatel'skogo instituta  
travmatologii i ortopedii.

FRIDMAN, Ya.D.; SEREBRYAKOV, V.I.; SOROCHAN, R.I.

Obtaining zinc oxide from low-grade products of complex ore  
dressing. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 3 no.3:  
135-149 '61. (MIRA 15:3)  
(Zinc--Metallurgy)

**"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548020004-7**

KAFEC, N. Y., ENGINEER, STANKEVICH, P. I.

"Increasing the Durability of Tools." Stanki i Instrument Vol. 15, Nos 7-8, 1944.

BR-52052019

**APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001548020004-7"**

SEREBRYAKOV, V.M., inzhener; FAYNGERSH, Ya.D., inzhener; RAYKH, I.Ya.,  
Inzhener

Use of glass tubing in electric installation work. Sbor. mat.  
o nov. tekhn. v stroi. 17 no.7:22-26 '55. (MIRA 8:9)  
(Electric conduits)

KIREYEV, M.I.; DZHALALOV, Ye.M.; UL'YASHCHENKO, V.Ye.; VESELOV, A.I.;  
PROSHCHIN, Ye.A.; SEREBRYAKOV, V.M.

Discussion on the use of PPV wire. Prom.energ. 11 no.7:19-27  
(MLRA 9:10)  
Jl. '56.

1. Gosenergonadzor Ministerstva elektrostantsii (for Kireyev)  
2. Glavnoye upravleniye pozharnoy okhrany Ministerstva vnutrennikh  
del SSSR (for Dzhalalov) 3. TSentral'nyy nauchno-issledovatel'skiy  
institut protivopozharnoy oborony (for Ul'yashchenko, Veselov)  
4. TSentroelektromontazh (for Proshchin) 5. Trest "Moselektronmontazh-1"  
(for Serebryakov).  
(Electric wire, Insulated)

VARTANOV, G.L., inzh.; SEREBRYAKOV, V.M., inzh.; GREBENKIN, V.G., inzh.,  
nauchnyy red.. Prinimal uchastiye PROSHKIN, I.A.. TYULENEVA, L.M.,  
red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Electric installation work] Elektromontazhnye raboty. Moskva,  
Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materiam, 1959.  
(MIRA 13:3)  
220 p.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organi-  
zatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stva.  
2. Brigadir elektromonterov tresta Moselektromontazh No.1 (for  
Proshkin).

(Electric wiring, Interior)

TIKHODEYEV, P.M.; FEDOROV, B.F.; VOLOTSKOY, N.V.; TELYAT'IEV, V.V.; ZIL'BER, D.A.;  
SAPOZHNIKOV, R.A.; SHAYKEVICH, A.S.; KHORRING, G.M.; SEREBRYAKOV, V.M.;  
DADIOMOV, M.S.; LEVIT, G.O.

Professor Viacheslav Vasil'evich Novikov; on his 70th birthday.  
Svetotekhnika 5 no.2:30 F '59. (MIRA 12:1)  
(Novikov, Viacheslav Vasil'evich, 1888-)